

NOVIKOV, S.S.; SLOVETSKIY, V.I.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.

Spectrophotometric determination of the dissociation constants  
of aliphatic nitro compounds. Izv.AN SSSR Otd.khim.nauk no.4:  
598-605 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Nitro compounds) (Dissociation)

SLOVETSKIY, V.I.; SHEVELEV, S.A.; YERASHKO, V.I.; FAYNZIL'BERG, A.A.;  
NOVIKOV, S.S.

Structure of salts of 1,1-dinitroalkanes and trinitromethane.  
Izv.AN SSSR.Otd.khim.nauk no.6:1126 '62. (MIRA 15:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Paraffins--Spectra)

S/C62/63/000/001/007/025  
B101/B186

AUTHORS: Slovetzkiy, V. I., Shevelev, S. A., Yerashko, V. I.,  
Faynzil'berg, A. A., and Novikov, S. S.

TITLE: Spectrometric structural analysis of the salts of  
1,1-dinitro alkanes and trinitro methane

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh  
nauk, no. 1, 1963, 57-63

TEXT: A comparative study was made of the IR spectra of the lithium, potassium sodium and ammonium salts of 1,1-dinitro methane, 1,1-dinitro ethane, 1,1-dinitro propane, 1,1-dinitrobutane, 1,1-dinitro pentane, 1,1-dinitro hexane, 1,1-dinitrodecane, and trinitro methane, in order to elucidate their structures. Results: All 1,1-dinitro alkanes have bands at  $\sim 1450$ ,  $\sim 1210$ , and  $\sim 1120$   $\text{cm}^{-1}$ , but no bands characterizing the stretching vibrations of N-O in the noncharged  $\text{NO}_2$  groups exist in the spectra of any of the compounds. The spectra of the salts show neither the two bands in the region of  $800-900$   $\text{cm}^{-1}$  that are found in free gem-dinitro alkanes, whereof at least one is caused by the stretching vibra-  
Card 1/2

Spectrometric structural ..

S/062/63/000/001/007/025

B101/B186

tions of the C-N bond, nor bands characteristic of the C=N bond. The nature of the cation has no effect on the spectrum except that in ammonium salts additionally  $\text{NH}_4^+$ -ion bands appear as well as a weak  $1580 \text{ cm}^{-1}$  band

produced by hydrolysis. Conclusion: All nitro groups are equivalent and participate similarly in the formation of the anion. Hence, the formulas of the salts are  $[\text{RC}(\text{NO}_2)_2]^- \text{M}^+$  and  $[\text{C}(\text{NO}_2)_3]^- \text{M}^+$ . No

carbanions are present. There are 2 figures and 5 tables. The most important English-language references are: N. Jonathan, J. Molecul. Spectra, 7, 105 (1961); L. W. Kissinger, H. E. Ungnade, J. Organ. Chem., 25, 1471 (1960).

ASSOCIATION: Institut organicheskoy khimii Akademii nauk SSSR  
(Institute of Organic Chemistry of the Academy of Sciences USSR)

SUBMITTED: March 26, 1962

Card 2/2

SHLYAPOCHNIKOV, V.A.; SHEVELEV, S.A.; YERASHKO, V.I.; FAYNZIL'BERG, A.A.;  
NOVIKOV, S.S.

Intensity of stretching N-O vibrations in nitro-alkanes and halogenated  
nitro alkanes. Izv.AN SSSR.Otd.khim.nauk no.9:1684-1686 S '62.  
(MIRA 15:10)

1. Institut organicheskoy khimii ii. N.D.Zelinskogo AN SSSR.  
(Paraffins—Spectra)

NOVIKOV, S.S.; BABIYEVSKIY, K.K.; SHEVELEV, S.A.; IVANOVA, I.S.; FAYNZIL'BERG, A.A.

Synthesis of 1,1,1,3,-tetrinitro-2-alkylpropanes and their cleavage  
by the action of bases. Izv. AN SSSR.Otd.khim.nauk no.10:1853-1855  
0 '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Propane) (Bases (Chemistry))

NOVIKOV, S.S.; SLOVETSKIY, V.I.; TARTAKOVSKIY, V.A.; SHEVELEV, S.A.;  
FAYNZIL'BERG, A.A.

On the existence of aci-forms of 1,1-dinitroalkanes and  
trinitromethane. Dokl. AN SSSR. 146 no.1:104-106 S '62.  
(MIRA 15:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
Predstavleno akademikom M.I. Kabachnikom.  
(Paraffins) (Nitro compounds)

SLOVETSKIY, V. I.; SHEVELEV, S. A.; YERASHKO, V. I.; FAYNZIL'BERG, A. A.;  
NOVIKOV, S. S.

Structure of salts of 1,1-dinitroalkanes and trinitromethane  
studied by spectral methods. Izv. AN SSSR, otd. khim. nauk  
no.1:57-63 '63. (MIRA 16:1)

1. Institut organicheskoy khimii AN SSSR.

(Paraffins—Spectra)

(Nitro compounds—Spectra)



YERASHKO, V.I.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.

Convenient process of obtaining disulcero and dibromodinitro-  
methane. Izv. AN SSSR. Ser. khim. no.11:2060-2061 '65.

(MIRA 18:11)

L. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

L 36505-66 ENT(m)/ENP(j)/T WN/JH/WE/RM

ACC NR: AP6017880

SOURCE CODE: UR/0062/66/000/005/0930/0932

AUTHOR: Ustynyuk, L. A.; Shevelev, S. A.; Faynzil'berg, A. A.ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR  
(Institut organicheskoy khimii Akademii nauk SSSR)TITLE: Effect of acylating agents on salts of 1,1-dinitroalkanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1966, 930-932

TOPIC TAGS: acylation, organic nitro compound, ethane, propane

ABSTRACT: The reactions of salts of gem-dinitroethane with the acylating agents acetyl chloride, acetic anhydride, acetyl nitrate, benzoyl chloride, methyl chloroacetate, and p-toluenesulfonyl chloride were all found to produce dinitroethyl ethyl nitrolate  $\text{CH}_3\text{C}(\text{NO}_2)=\text{N}-\text{O}-\text{C}(\text{NO}_2)_2\text{CH}_3$  (I). Its yield varied over a wide range with the conditions of the reaction, i.e., the nature of the solvent and cation, proportion of the reactants, and temperature. Thus, in the reaction of the potassium salt of gem-dinitroethane with acetyl chloride in polar solvents (acetone, acetonitrile, dimethylformamide), the yield of (I) was ~30%, but in solvents of low polarity, where the potassium salt is practically insoluble, (I) was not formed at all. If however the triethylamine salt of gem-dinitroethane, which is soluble in all these solvents, is introduced into the reaction, the formation of (I) in substantial quantities is always

UDC: 542.91 + 547.232

Card 1/2

L 36805-66

ACC NR: AP6017880

observed. The effect of acylating agents, particularly acetyl nitrate, on salts of 1,1-dinitropropane was also studied. Like 1,1-dinitroethane, 1,1-dinitropropane under these conditions was found to yield a product of autoxidation, dinitropropyl propyl-nitrolate  $C_2H_5C(NO_2)=N-OC(NO_2)_2C_2H_5$ .

SUB CODE: 07/ SUBM DATE: 08Oct65/ ORIG REF: 001/ OTH REF: 002

Card 2/2 MLP

SHEVELEV, S. B.

"Meetings of the Chemical Sciences Section 28 - 29 September and 26 - 27 October," Iz. Ak. Nauk SSSR, Otdel. Khim. Nauk, No. 2, 1949; "The Commission on Scientific Photography and Cinematography of the Department of Chemical Sciences of the Academy of Sciences of the USSR," *ibid.*, No. 6, 1949; "General Assembly of the Department of Chemical Sciences of the Academy of Sciences of the USSR," *ibid.*

SHEVELEV, V.

Improve the planning and utilization of the working capital of  
enterprises. Den. i kred. 17 no. 4:25-30 Ap '59.  
(MIRA 12:8)

(Finance)

SHEVELEV, V.

Bank control over the observance of an economy regime by enterprises. Den.i kred. 18 no.5:25-31 My '60.

(MIRA 13:5)

1. Upravlyayushchiy Leningradskim otdeleniyem Gosbanka Moskvy.  
(Moscow--Costs, Industrial) (Moscow--Banks and banking)

ZHADAN, V.Z.; SHEVELEV, V.A.

Automatic control of airtightness in sealing canned food. Kons. i  
ov. prom. 14 no.10:15-19 0 '59. (MIRA 12:12)

1.Odesskiy tekhnologicheskii institut pishchevoy i kholodil'noy pro-  
myshlennosti (for Zhadan). 2.Odesskiy mashinostroitel'nyy zavod imeni  
Kalinina (for Shevelev).

(Canning and preserving--Apparatus and supplies)

(Sealing (Technology))

SHEVELEV, Vasilii Alekseyevich; BORULYA, A., red.; TELEGINA, T.,  
tekhn. red.

[Bank control in industry] Bankovskii kontrol' v pro-  
myshlennosti; iz opyta raboty Leningradskogo otdeleniia  
Gosbanka Moskvyy. Moskva, Gosfinizdat, 1962. 73 p.

(MIRA 16:4)

(Moscow—Banks and banking)

(Moscow—Auditing and inspection)



TUROVA, A.D.; SHEVELEV, V.A.; BAN'KOVSKIY, A.I.; ALESHKINA, A.A.

New drug "cardiovalen" for heart diseases. Apt.delo 5 no.3:43-45  
My-Je '56. (MLRA 9:8)

1. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta lekarstven-  
nykh i aromaticeskikh rasteniy (VILAR)  
(PHARMACOLOGY) (HEART--DISEASES)

SHEVELEV, V.A., kand.khimicheskikh nauk

New preparation from fresh medicinal plants is "Plantago juice."  
Apt.delo 8 no.6:70-71 M-D '59. (MIRA 13:4)

1. Iz laboratorii tekhnologii Vsesoyuznogo nauchno-issledovatel'-  
skogo instituta lekarstvennykh i aromaticeskikh rasteniy (VILAR).  
(PLANTAIN)

SHEVELEV, V.A.; BAN'KOVSKIY, A.I.; ALESHKINA, Ya.A.

Active substances of the cardiac drug "Kardiovalen." Trudy  
VILAR no. 11:317-329 '59. (MIRA 14:2)  
(CARDIAC GLYCOSIDES)

ROSTOTSKIY, B.K.; SHEVELEV, V.A.; BAN'KOVSKIY, A.I.

Methods for obtaining an insecticide preparation from Anabasis.  
Trudy VILAR no. 11:330-350 '59. (MIRA 14:2)  
(ANABASIS (BOTANY)) (ALKALOIDS) (INSECTICIDES)

SHEVELEV, V.A.; BAN'KOVSKIY, A.I.; MURAV'YEVA, V.I.

Machine-drying of opium raw material. Trudy VILAR no. 11:351-353  
'59. (MIRA 14:2)

(BIOLOGICAL PRODUCTS—DRYING) (OPIUM)

BAN'KOVSKIY, A.I.; PEREL'SON, M.Ye.; SHEVELEV, V.A.

Alkaloids from globe thistle. Dokl. AN SSSR 148 no.5:1073-1076  
F '63. (MIRA 16:3)

1. Vsesoyuznyy institut lekarstvennykh i aromaticeskikh rasteniy.  
Predstavleno akademikom M.M.Shemyakinym.  
(Echinopsine)

SHEVELEV, V.A.; KRIVUT, B.A.; KISELEVA, Ye.Ya.

Analysis of pharmaceutical preparations by the capillary  
fluorescence method. Apt. delo 14 no.5:56-60 S-O '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh  
i aromaticeskikh rasteniy, Bittsa, Moskovskoy oblasti.

SH EVELY, U.A.

28(5)  
 AUTHOR: Butrochanko, B. A., Lobanov, A. M., Mikhaylov, G. P.,  
 Shevelov, V. A.  
 TITLE: Apparatus for Measuring Dielectric Losses and the Permeability  
 of Solid Dielectrics  
 PERIODICAL: Izvestiya laboratoriya, 1959, Vol 25, No 9, pp 1121-1124 (USSR)  
 ABSTRACT: The angles of dielectric losses  $\lg \delta$  and the dielectric  
 constant  $\epsilon$  within the range of decimeter waves are measured  
 being measured according to two methods - 1) at the coaxial  
 line, 2) of the coaxial resonator (CR) (see Fig. 1). The available  
 measurements of  $\epsilon$  do not, however, allow measurements  
 within a wide temperature range. A (CR) has been designed,  
 which allows measurements of the relative  $\lg \delta$  and  $\epsilon$  within a  
 rather wide temperature range. The (CR) consists of a brass  
 cylinder with two covers, the inner cover being soldered with  
 silver to the inner side of the (CR) to the generator and detector  
 and connecting tubes of the (CR) to the side walls. The inside  
 surfaces of the (CR) are silver-plated and polished. The  
 Q-factor of the (CR) attains the value 6500, with a theoretical  
 Q-factor of 10,000. From the block diagram of the system  
 (Fig 2) it can be seen that the (CR) is connected via an ab-

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scription-attenuator (with attenuation - 20 decibels) to a  
 generator of type G33-12 (frequency range 160-1000 megacycles).  
 The amplifier 20-IM is used as indicator. Temperature and  
 measured according to an already described method (see Fig. 1).  
 The method of calculation to determine the values of  $\lg \delta$  and  $\epsilon$   
 is described and measurement results concerning the temperature  
 function of these values, gathered from measurements of molten  
 quartz and polytetrafluoro ethylene (see Fig. 3), are quoted. The  
 results show that the described determination method is suitable  
 for the examination of polymer dielectrics, in which  $\lg \delta$   
 reaches magnitudes of  $10^{-4}$ . There are 3 figures and 10  
 references, 5 of which are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk USSR  
 (Institute for High Molecular Compounds of the Academy of  
 Sciences, USSR)

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PLATE 1 FOR EXHIBITION

SON/4379

Vsesoyuznaya konferentsiya po fizike dielektrikov. 24, 1958

Fizika dielektrikov: Izv. vsesoyuznoy konferentsii. (Physics of Dielectrics. Transactions of the 24 All-Union Conference on the Physics of Dielectrics) Moscow, Izdat. AN SSSR, 1960. 532 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Fizicheskii Institut Imeni P.N. Lebedeva.

Ed. of Publishing House: Ye.L. Shchegolevskiy, Tech. Ed.: I.B. Dorokhin; Editorial Board: (Resp. Ed.) G.I. Samoylov, Doctor of Physics and Mathematics (Moscow), and K.Ye. Filippov, Candidate of Physics and Mathematics.

Purpose: This collection of reports is intended for scientists investigating the physics of dielectrics.

Content: The Second All-Union Conference on the Physics of Dielectrics held in Moscow at the Physicotechnical Institute Imeni P.N. Lebedeva (Physics Institute Imeni P.N. Lebedev) in November 1958 was attended by representatives of the principal scientific centers of the USSR and of several other countries. This collection contains most of the reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific inductive capacitance of various crystals, chemical compounds, and ceramics. Photoconductivity, ferroelectric crystals, and various radiation and irradiation effects on dielectrics are investigated. The volume contains a list of other papers presented at the conference dealing with polarization, losses, and properties of dielectrics, which were published in the journal *Izvestiya AN SSSR Seriya Fiziko-Matematicheskie Nauki*, 1957, and 1960. No personalities are mentioned. References accompany each report.

Abstracted by: K.Ye. Lisov, and I.D. Fedotova. Temperature Dependence of Dielectric Properties

Platzner, J.S. Specific Inductive Capacitance and Dielectric Losses of Some Organic Materials in Strong High-Frequency Electric Fields at High Temperature (Sibirskiy fiziko-tekhnicheskii fil'ial Yuzh. (Siberian Physics and Technical Scientific Research Institute, Tomsk))

Discussion

Golubev, I.M. On the Problem of the Static Specific Inductive Capacitance of Heterogeneous Dielectrics (Vostochnyye sotsializmyeskiy Institut (Far Eastern Agricultural Institute))

Arbuzov, V.G. R.F. Dielectric Parameters of Double Liquid Systems in the Critical Region (Vostochnyye sotsializmyeskiy Institut)

Yakovlev, A.M. Acoustical Dispersion Observed in Some Dielectrics at Audio Range (Vostochnyye sotsializmyeskiy Institut)

Paras, Ya.M., and V.I. Lebedev. Dielectric Properties of Heterogeneous Dielectrics at Superhigh Frequencies

Discussion

Mikhailov, G.P., and A.M. Lobanov. Study of  $\epsilon'$  and  $\epsilon''$  in Polymers as a Function of Temperature at Superhigh Frequencies (Institut yuzhnoye sotsializmyeskiy AN SSSR, Leningrad (Institute of High Molecular Compounds, AN USSR, Leningrad))

Beskin, S.M. Dielectric Characteristics ( $\epsilon'$  and  $\epsilon''$ ) of Impregnated Cable Paper in Relation to the Properties of the Components (Paper and Oil) (Vostochnyye sotsializmyeskiy Institut (Moscow Power Engineering Institute))

Discussion

Kolotarskiy, V.M. Problems of the Dynamic Theory of Thermal Phenomena in Solids

Karlov, Yu.G. V.A. Krasnoperov, Yu.T. Gerasimov, and V. Peregudin. On the Movement of Dielectric in an Electric Field (Vostochnyye sotsializmyeskiy Institut Im. V.I. Ul'yanova (Leningrad) (Leningrad Electrotechnical Institute Imeni V.I. Ul'yanov (Leningrad))

Dmitriyenko, D.A., and V.A. Shvaytser. Use of Contact Resonators for Measuring Polymer Dielectric Losses and Specific Inductive Capacitance in Relation to Temperature (Institute of High Molecular Compounds, Academy of Sciences USSR, Leningrad)

Zhelezov, I.G., and V.M. Filizhin. Photoconductivity and an Electrophoretic Process in Polymers (Institut yuzhnoye sotsializmyeskiy AN SSSR, Moscow (Institute of Crystallography, Academy of Sciences USSR, Moscow))

Gubilo, A.N., and V.I. Seleznev. On Charge Stability of Inorganic Dielectrics (Fizicheskii Institut Imeni P.N. Lebedev, AN SSSR, Moscow)

MIKHAYLOV, G.P.; IOBANOV, A.M.; SHEVELEV, V.A.

Temperature dependence of the dipole-elastic relaxation time of  
polymers. Vysokom.soed. 3 no.5:794-797 My '61. (MIRA 14:5)

1. Institut vysokomolekulyarnykh soyedineniy AN S SSR.  
(Polymers)

S/032/62/028/002/028/037  
B124/B101

AUTHORS: Mikhaylov, G. P., Shevelev, V. A., and Dmitrochenko, D. A.

TITLE: Device for measuring dielectric losses and dielectric constant of solid polymer dielectrics

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 234-236

TEXT:  $\epsilon'$  and  $\tan \delta$  can be measured in a wide temperature range with a setup based on the standard measuring device. The measuring circuit was connected with the standard-signal generator ГСС-17 (GSS-17) through attenuator АС-1 (AS-1) and УР-1А (UR-1A) or УР-2 (UR-2) broad-band amplifier. The measuring amplifier 28ММ (28IM) was used as resonance indicator. The resonance frequency was checked with a УВР- (UVR) wavemeter. The first modification of the measuring circuit, shown in Fig. 1, a, is designed for use in a wide temperature range. The dielectric sample is placed into the gap of measuring capacitor 2 containing no mobile electrodes. Insulation 3 is made of a high-frequency ceramic material. Thermostat 5 ensures constant temperature of loop 6, induction coil 7, detector crystal 8, and screen 9. The second modification, shown Card 1/8/ ✓

Device for measuring dielectric losses ... S/032/62/028/002/028/037  
B124/B101

in Fig. 1,6, is designed for measurements at room temperature, with trimming condenser 10 being as close as possible to the gap of the measuring capacitor, thereby permitting accurate measurement of the capacitance. Plane parallel sample disks with a thickness of 0.001 to 0.005 mm in excess of that of the gap between the electrodes were used, the diameter of which was calculated from  $D_0 \ll D - 1.14d$ , where  $D_0$  is the diameter of the sample,  $D$  is that of the electrodes, and  $d$  is the thickness of the sample. With the first modification,  $\epsilon'$  is found from the change of resonance frequency after the introduction of the sample into the gap of the measuring capacitor, i. e., from  $\epsilon' = (C_n/C_0) \left[ (f_1/f_2)^2 - 1 \right] + (f_1/f_2)^2$ ;

$\tan \delta = \left[ 1 + (C_n/\epsilon' C_0) \right] \cdot \left[ (1/Q_2) - (1/Q_1) \right]$ ;  $C_0 = D_0^2/16d$ , and  $C_n = C - C_0$ , where  $C$  is the total capacitance of the circuit,  $f_1$  and  $f_2$  are the resonance frequencies in the absence and presence of the sample,  $Q_1$  and  $Q_2$  are the efficiencies of the circuit in the absence and presence of the

Card 2/54

Device for measuring dielectric losses ...

S/032/62/028/002/028/037  
B124/B101

2 figures and 9 references: 6 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: ASTM, D150-54T; W. Reddish, Transactions of the Faraday Society, 46, 459 (1950).

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR  
(Institute of High-molecular Compounds of the Academy of Sciences USSR) ✓

Fig. 1. Schematic diagram of the measuring circuits. Legend: (A) water.

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DMITROCHENKO, D.A.; LOBANOV, A.M.; SHEVELEV, V.A.

Apparatus for measuring the temperature dependencies of the dielectric constant  $\epsilon'$  and dielectric loss  $\epsilon''$ . Zav.lab. 29 no.12:1495-1497 '63.  
(MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

ACCESSION NR: AP4012183

S/0191/64/000/002/0009/0012

AUTHORS: Mikhaylov, G. P.; Lobanov, A. M.; Shevelov, V. A.; Orlova, T. P.

TITLE: Dependence of  $\text{tg}\delta$  and  $\epsilon'$  of polyethylene on temperature in the range of ultra high frequencies

SOURCE: Plasticheskiye massy\*, no. 2, 1964, 9-12

TOPIC TAGS: polyethylene, ultra high frequency relaxation, high frequency relaxation, dipole losses. testing of plastic

ABSTRACT: For polyethylene rolled more than one hour at 160 C a field of maximum  $\text{tg}\delta$  at a frequency of  $10^9$  hertz is observed at room temperature. At frequencies of  $3 \times 10^7$  and  $4.7 \times 10^8$  hertz,  $\text{tg}\delta$  of polyethylene at temperature intervals of -60C to +160C passes through a peak zone three times; two types of losses at these two frequencies can be attributed to losses of mean frequency and high frequency relaxation, combined with orientational polarization in amorphous zones of polyethylene. Also at these frequencies new dipole losses appeared which are not to be attributed to three previously known

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ACCESSION NR: AP4012183

types of losses in polyethylene. It is also observed that during heat treatment of low density polyethylene in the presence of atmospheric oxygen,  $\text{tg}\delta$  in a maximum field at specified frequencies increases proportionally with time. In these specimens of polyethylene one wide field of  $\text{tg}\delta$  appears as a result of application of the three types of losses noted in the original polyethylene. Uneven changes typical of dipole polarization were observed first at temperature dependence  $\epsilon'$  of polyethylene. In polyethylene at room temperature,  $\text{tg}\delta$  passes through the maximum field in the vicinity of frequency  $4.7 \times 10^8$  hertz. The amount of  $\text{tg}\delta_{\text{max}}$  is extremely sensitive to the content of polar additions combined with macromolecules. This work served for a period as one of the foundations for recommendations for the All Union State Standard for testing of plastics at a frequency of  $4.7 \times 10^8$  hertz. Orig. art. has: 4 Figures

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: MA

NR REF SOV: 015

OTHER: 005

Card 2/2



ACCESSION NR: AP4037283

S/0190/64/006/005/0868/0870

AUTHORS: Mikhaylov, G. P.; Lobanov, A. M.; Shevelev, V. A.; Orlova, T. P.

TITLE: The relation between epsilon prime and tan delta of Teflon and temperature at the frequency of  $4.7 \cdot 10^8$  cycles per second

SOURCE: Vy\*sokomolekulyarny\*ye soyedineniya, v. 6, no. 5, 1964, 868-870

TOPIC TAGS: polytetrafluorethylene, Teflon, epsilon prime Teflon, tan delta Teflon

ABSTRACT: Measurements obtained using the method described by D. A. Dmitrochenko, A. M. Lobanov, G. P. Mikhaylov, and V. A. Shevelev (Zavodsk. lab., 1959, No. 9, 1121) are presented on Fig. 1 of the Enclosures. Here curves 1, 1', 5, and 6 pertain to the original annealed Teflon samples, curves 2 and 2' to the hardened samples, curves 3 and 3' to the compressed samples, and curves 4 and 4' to samples cut from the necked portion of samples subjected to tension. The low concentration of admixtures is probably responsible for the absence of  $\tan \delta$  maximum at 323K on curve 6. The increase of  $\tan \delta$  max in hardening indicates that the observed losses are related to orientation processes in the amorphous phase of the polymer. The value of  $\epsilon'$  diminished during hardening, compressing, and

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ACCESSION NR: AP4037283

elongating of the samples. Figure 2 of the Enclosures shows the relations between the logarithm of frequency and the reciprocal temperature at which  $\tan \delta_{\max}$  is constant. The activation energy calculated from the straight line segments of this curve is equal to 18.5 kcal/mole and 12 kcal/mole (below and above 248K, respectively). Orig. art. has: 2 graphs.

ASSOCIATION: Institut vyssokomolekulyarnykh sovedineniy AN SSSR (Institute of High-Molecular Compounds, AN SSSR)

SUBMITTED: 10Jun63

ENCL: 03

SUB CODE: GC

NO REF SOV: 003

OTHER: 015

Card 2/5

ENCLOSURE: 01

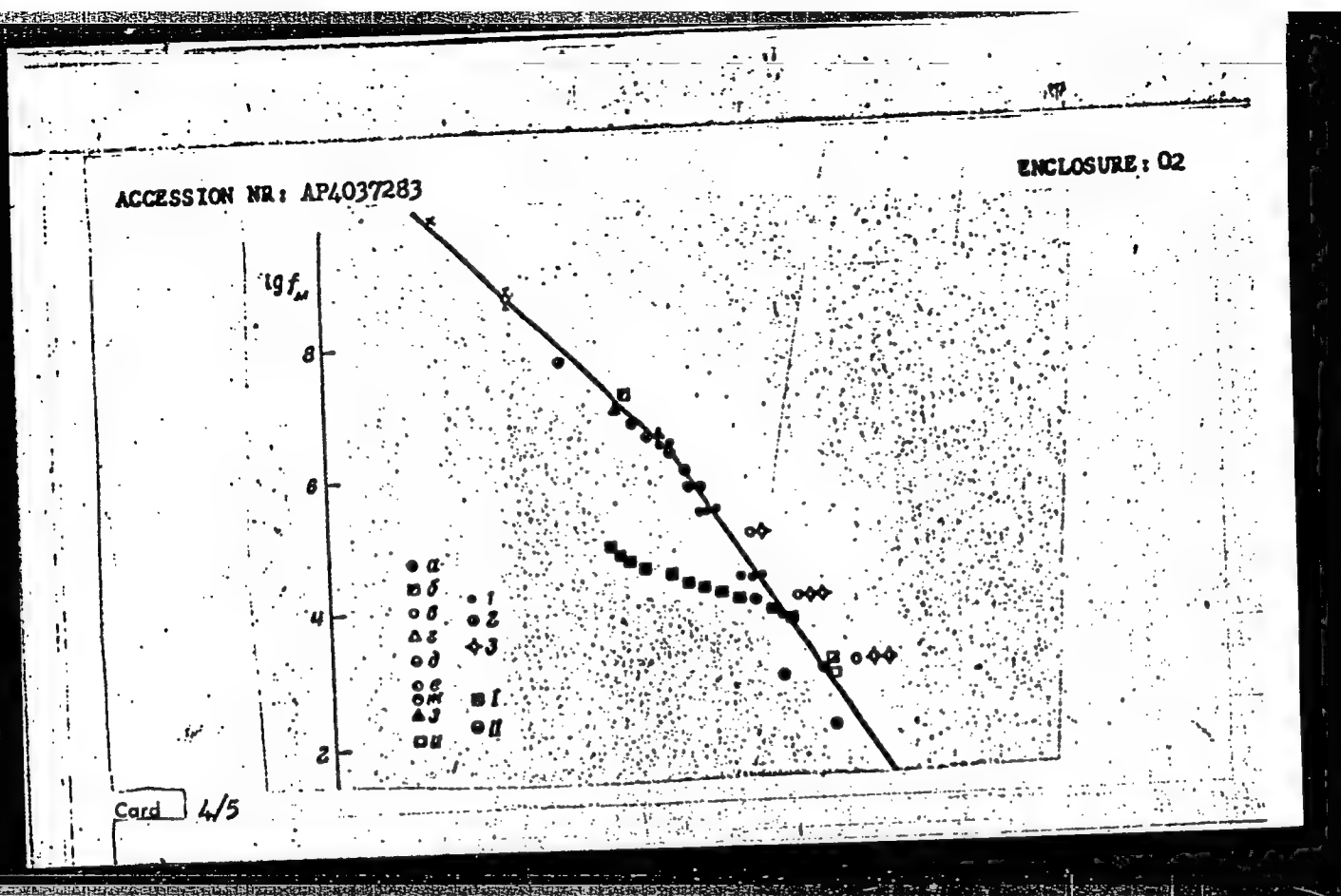
ACCESSION NR: AP4037283



Fig. 1. Relation of  $\epsilon'$  and  $\tan \delta$  of Teflon to temperature at the frequency of  $4.7 \times 10^8$  cps.

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Card



ACCESSION NR: AP4037283

ENCLOSURE: 03



Fig. 2. Relation of  $\log f_m$  to  $1/T$  for Teflon.

Mechanical determinations: a - [2, 3];  $\delta$  - [7]; B - [8, 9];  
 2 - [10, 12];  $\partial$  - [13]; e - [14]; Ж - [15]; 3 - [16];  
 u - [11]. Dielectrical determinations: 1 - [2, 3]; 2 - [4];  
 3 - [5, 6, 7]. Data obtained with the method used by R. K. Eby  
 and K. M. Sinnot (J. Appl. Phys., 32, 1756, 1961) and by J. G.  
 Powlès and J. A. Kail (J. Polymer Sci., 31, 183, 1958).

5/5

Card

SHEVELEV, V.F.. nachal'nik; VORONIN, K.N., sekretar' partkoma inzhener.

Supplying industry continuously. Vest.mash. 33 no.4:66-67 Ap '53.  
(MLRA 6:5)

1. Otdel metallov ChTZ.

(Machinery industry)

SHEVELEV, V.I.

Progressive workers are helping the lagging workers.  
Neftianik 5 no.5:12-13 My '60. (MIRA 13:6)

1. Predsedatel' Kuybyshevskogo obkoma profsoyuza rabochikh  
neftyanoy i khimicheskoy promyshlennosti.  
(Kuybyshev Province--Petroleum industry)

SHEVELEV, V. M.

"Investigation of the Traction Properties of the Tractor DT-54 on Ravine Slopes in the Forest-Steppe Region of the Ukrainian SSR." Cand Tech Sci, Ukrainian Order of Labor Red Banner Agricultural Acad, Min Higher Education USSR, Kiev, 1954. (KL, No 1, Jan 55)



SHEVCHUK, V. I.

"Investigation of the Hauling Properties of the DT-54 Tractor When in Operation on the Forest Steppe Gullies of the Ukrainian SSR." Cand Tech Sci, Ukrainian Order of Labor Red Banner Agricultural Academy, Min Higher Education USSR, Kiev, 1955. (KL, No 12, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Education Institutions (15)

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; SALT'YKOV, R.A.; LARINA, I.A.;  
ANAN'YEVA, Ye.P.; SHEVELEV, V.M.

Experimental study of the immunogenic properties of associated  
anerobic toxoids. Report No.1: Study of the immunological  
effectiveness of sextatoxoids in primary immunization of animals.  
Zhur.mikrobiol.epid.i immun. 32 no.1:28-32 Ja '61. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN  
SSSR.

(TOXINS AND ANTITOXINS)

SHEVELEV, V.M.

Determination of the immunogenic properties of sorbed botulism  
antitoxins of types A and B white mice. Zhur.mikrobiol.epid.i  
immun. 32 no.1:81-85 Ja '61. (MIRA 14:6)  
(BOTULISM)

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; SALTYKOV, R.A.; LARINA, I.A.; SHEVELEV, V.M.

Experimental study of immunogenic properties of associated anaerobic  
anatoxins. Report No.2: Study of the immunological effectiveness of  
a sexta-anatoxin following late re-immunization. Zhur. mikrobiol.  
epid. i immun. 32 no.7:74-77 Je '61; (MIRA 15:5)  
(TOXINS AND ANTITOXINS)

VOROB'YEV, A.A.; VASIL'YEV, N.N.; YENICHEV, V.M.; PATRIKEYEV, G.T.;  
SHEVELEV, V.M.; ZYBIN, V.D.; KORNEV, I.S.; ANAN'YEVA, Ye.P.  
Prinimali uchastiye: ANDROSHCHUK, S.M.; NIKOLAYENKO, Yu.P.;  
MAKAROVA, V.A.; CHERNOVA, Yu.S.; POYARKOVA, M.A.; IGONINA, Yu.A.;  
MORDUYEVA, A.A.

Study of botulin anatoxins. Report No.2: Botulin anatoxin type B.  
Zhur.mikrobiol., epid. i immun. 32 no.10:68-72 0 '61. (MIRA 14:10)  
(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; SALT'YKOV, R.A.; LARINA I.A.;  
SHEVELEV, V.M.

Experimental study on polyvalent anaerobic toxoids. Part 4:  
Study of the immunological effectiveness of octatoxoid in  
late revaccination. Zhur. mikrobiol., epid. i immun. 40.  
no.1:127-132'63. (MIRA 16:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei  
AMN SSSR.

\*

VOROB'YEV, A.A.; VASIL'YEV, N.N.; SHEVELEV, V.M.; VORONOVA, Z.A.; PETROVA,  
Ye.K.; BAZHENOVA, G.A.; ANDROSHCHUK, S.M.

Study of botulin anatoxins. Report No.6: Type D botulin anatoxin.  
Zhur. mikrobiol., epid. i immun. 40 no.9:87-92 S'63.

(MIRA 17:5)

VYGODCHIKOV, G.V., VOROB'YEV, A.A.; LARINA, I.A.; LABINSKIY, A.P.;  
GERNER, V.D.; SHEVELEV, V.M.; SERGEYEVA, N.S.

Experimental study of the immunogenic properties of combined  
anaerobic toxoids. Report No.5: Immunogenic properties of  
combined polytoxoid in primary immunization of animals. Zhur.  
mikrobiol., epid. i immun. 40 no.10:51-58 O '63.

(MIRA 17:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei  
AMN SSSR.



ACCESSION NR: AP4025078

S/0016/64/000/003/0065/0069

AUTHOR: Shevelev, V. M.; Voronova, Z. A.; Rezepov, F. F.

TITLE: Antigen specificity of Cl. botulinum types C, D, and E

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, <sup>41-</sup>no. 3, 1964, 65-69

TOPIC TAGS: botulism, Cl. botulinum types C, D, and E, botulinus toxin, botulinus heterogeneous toxin, antigen specificity, antigen affinity, neutralization reaction, precipitinogen

ABSTRACT: The degree of antigen affinity between Cl. botulinum types C, D, and E was determined by neutralization reaction of their toxins, passive and active immunization, and precipitation reaction with bacterial antigens. For neutralization reactions, antitoxin serums types C, D, and E were mixed with various quantities of homo- and heterogeneous toxins, kept at room temperature for an hour, and then were injected intravenously into white mice. Death rate and clinical symptoms during the following four days served as indices. For passive immunization antitoxin serums types C, D, and E were injected intravenously into white mice and an hour later homo- and

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1/2

ACCESSION NR: AP4025078

heterogeneous toxins were injected intraperitoneally. To find possible cross immunity, actively immunized animals received single subcutaneous immunization with concentrated botulinus antitoxins types C, D, and E sorbed in aluminum oxide hydrate and immunity strength was tested. For cross precipitation reactions, boiled extracts of microbe cells common to 8 strains of Cl. botulinum C, D, and E were used as antigens. Findings show that botulinus toxins types C, D, and E have a certain antigenic affinity. Large doses of antitoxin for a given type are capable of neutralizing small doses of heterogeneous toxin. Active or passive immunization against botulinus toxins C, D, and E produces insignificant resistance to other type toxins. Cl. botulinum type D strains contain bacterial antigens (precipitinogens) common to antigens found in C and E type strains. Antigen specificity of Cl. botulinum types C, D, and E is confirmed by these data with only an insignificant affinity found between types C, D, and E. Orig. art. has: 4 tables.

ASSOCIATION: None

SUBMITTED: 18Jan62

ENCL: 00

SUB CODE: LS

NR REF SOV: 001

OTHER: 004

Card: 2/2

L 58311-65 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5013797

UR/0016/65/000/005/0114/0119

576.851.71.097.2.98

AUTHOR: Lukin, Ye. P.; Vasil'yev, N. N.; Vorob'yev, A. A.; Shevelev, V. M. <sup>25</sup><sub>B</sub><sub>6</sub>

TITLE: Study of the immunological properties of soluble Rickettsia prowazeki antigen.  
Report II. Isolation of the antigen by means of DEAE-cellulose

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 5, 1965, 114-119

TOPIC TAGS: Rickettsia prowazeki, immunology, antigen, antibody, ion exchange chromatography

ABSTRACT: The method of ion exchange with diethylaminoethyl-cellulose (DEAE-cellulose) was used to obtain purified preparations of soluble *R. prowazeki*. Fractions of soluble *R. prowazeki* antigen of both the virulent (Breinl) and vaccinal (E) strains obtained by separating preparations of soluble antigen in columns with DEAE-cellulose and present in eluates corresponding to an ionic strength of 0.2, 0.3, or 0.4 M NaCl proved to be immunologically active. In adequate doses (4-10 EC) they ensured the appearance of complement-fixing antibodies in the blood of vaccinated animals and protected them from subsequent infection with a virulent culture. The

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L 58311-65

ACCESSION NR: AP5013797

degree of protection varied with the dose of antigen and its source (Breinl or E strain). To produce large quantities of soluble antigen by means of DEAE-cellulose requires the development of a technology for fractioning preparations on cellulose esters which possess ion-exchange properties. Orig. art. has: 3 tables.

ASSOCIATION: none

SUBMITTED: 07Apr64

ENCL: 00

SUB CODE: LS

NO REF SOV: 002

OTHER: 001

Card 2/2

L 42067-65 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5010902

UR/0286/65/000/007/0092/0093

AUTHORS: Markovich, A. V.; Vorob'yev, A. A.; Vasil'yev, N. N.; Patrikeyev, G. T.; Yenichev, V. M.; Zybin, V. D.; Kornev, I. S.; Shevelov, V. M.; ~~Anan'yeva, Ye. P.~~

TITLE: Botulitic anatoxins of types A and B. Class 30, No. 169751

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 92-93

TOPIC TAGS: anatoxin, toxic substance, botulism, inoculation

ABSTRACT: This Author Certificate presents botulitic anatoxins, purified, concentrated, and sorbed with aluminum hydroxide. To produce in the blood of the inoculated people the antitoxic titers of types A and B and of the order 1-3 AE/ml, one ml of each preparation is made to contain 1000 antigenic units (EU per one AE) of the corresponding anatoxins with specific activity of no less than 3000 EU/1 mg of total nitrogen and not over 3.5 mg of aluminum hydroxide.

ASSOCIATION: none

SUBMITTED: 18May60

ENCL: 00

SUB CODE: 1S

NO REF SOV: 000

OTHER: 000

Card. 1/1 *am*

L 64318-65 ET(1)

ACCESSION NR: AP5020215

UR/0170/65/009/001/0064/0069

AUTHOR: <sup>44.55</sup>Shevelev, V. M.; <sup>536.3</sup>Markov, B. L.

32  
29  
B

<sup>44.55</sup>  
<sup>21,44.55</sup>  
TITLE: Measurement of the radiant properties of a flame with a radiometer without means of condensation

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 9, no. 1, 1965, 64-69

TOPIC TAGS: flame, flame temperature, radiometer, thermal battery, heat transfer coefficient, black body radiation

ABSTRACT: The article gives construction details of a radiometer without means of condensation which gives sufficiently accurate measurements of flame properties, using the Schmidt method for calculation. A simple model was first constructed which consisted basically of a thermopile and three diaphragms or orifice plates. Experimental results from this type of radiometer were unrealistic. Analysis led to the conclusion that the reason for the errors in measurement was turbulent pulsations of the flame which, penetrating to the thermopile, increased

Card 1/2

L 64318-65

ACCESSION NR: AP5020215

3  
the heat transfer coefficients at the electrode and at the "base", and intensified the field. A new model was constructed with a larger number of diaphragms to eliminate the effect of turbulent pulsations. The body of the instrument and the diaphragms were made of copper and the diaphragms were welded to the body. The article shows a schematic with construction details. Scatter of the readings, calibrated against a black body, does not exceed 1%. Preliminary evaluation of the Schmidt method in this instrument yields the following maximum possible errors: radiation of the flame, 1.5%; absorptive capacity of the flame, 6.5%; and, temperature of the flame, 5%. The accuracy achieved in practice was less, the scatter of the readings being 10-15%. Orig. art. has: 9 formulas, and 3 figures

ASSOCIATION: Institut metallurgii, Yuzhno-Ural'skogo sovnarkhoza, g. Chelyabinsk (Metallurgical Institute, South Ural National Economy Council) 44.55

SUBMITTED: 16Nov64

ENCL: 00

SUB CODE: GC, TD

NR REF SOV: 007

OTHER: 002

Card

2/2

SHEVELEV, V.M.

Criteria for the description of heat exchange in a furnace  
with stationary heat conditions. Izv. vys. ucheb. zav.; Chern.  
met. 8 no.9:195-200 '65. (MIRA 18:9)

1. Chelyabinskiy nauchno-issledovatel'skiy institut metallov.



L 21547-66

ACC NR: AP6007695

SOURCE CODE: UR/0413/66/000/003/0074/0074

AUTHOR: Shevelev, V. M.; Markov, B. L.

ORG: none

TITLE: A radiometer. Class 42, No. 178527

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 74

TOPIC TAGS: radiometer, combustion chamber test

ABSTRACT: This Author's Certificate introduces a radiometer for measuring the radiation of a flame jet in a combustion chamber. The instrument contains a housing and two principal diaphragms which limit the radiation beam falling on the heat sensor located behind them. Measurement accuracy is improved by placing a set of auxiliary diaphragms between the two principal diaphragms. Two types of these auxiliary diaphragms are alternated: the first type has a central aperture with an axis at an angle to the optical axis of the radiometer, and the second type has a central aperture with an axis which coincides with the optical axis of the radiometer and two additional apertures along the periphery. Orig. art. has: 1 figure. [14]

UDC: 536.521.2

Card 1/2

L 21547-66

ACC NR: AP6007695

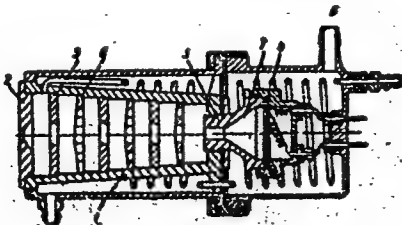


Fig. 1.

1-Housing; 2 and 3-principal diaphragms; 4-heat sensor; 5 and 6-auxiliary diaphragms; 7-heat sensor cavity.

SUB CODE: 13/ <sup>21</sup>

SUBM DATE: 11Jul63/

ATD PRESS: 4219

Card 2/2

BLC

35961  
S/207/62/000/002/004/015  
D237/D302

26.2253

AUTHORS: Aravin, G. S. and Shevelev, V. P. (Moscow)

TITLE: Thermal ionization and electrical conductivity of some mixtures and combustion products

PERIODICAL: Zhurnal Prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1962, 20-31

TEXT: Assuming thermal ionization (Sach equation) and making extensive use of the available data, the authors compute electron concentrations and electrical conductivity for various inert gases (A, N<sub>2</sub>, He) with addition of easily ionizable elements (Cs, K, Na), between 1500 - 4000°K, and for combustion products of some gaseous, highly calorific fuels at atmospheric pressure with Cs, K and Na. Electrical conductivity of the mixtures and its dependence on the temperature and pressure, were studied for various gases and concentrations of additives. An approximate formula was obtained for the optimal ratio of weights  $\alpha_{opt}$  of the additive G<sub>1</sub> and the gas

Card 1/3

Thermal ionization and ...

S/207/62/000/002/004/015  
D237/D302

$G_2$ , which is

$$\alpha_{\text{opt}} = \frac{\mu_1 \left[ \frac{q_2}{Q_1 - Q_2} + \sqrt{\frac{K_1 Q_2}{p(Q_1 - Q_2)}} \right]}{\mu_2 \left[ 1 - 2 \sqrt{\frac{K_1 Q_2}{p(Q_1 - Q_2)}} - \frac{Q_2}{Q_1 - Q_2} \right]} \quad (3.1)$$

where  $\mu_1$  and  $\mu_2$  are mol. wts. of the additive and the gas respectively,  $Q_1$  and  $Q_2$  are the respective concentrations,  $K_1$  = ionization constant of the additive,  $p$  = pressure. The influence of electric and magnetic fields was neglected and the results are approximate. Various relationships are presented in tabular and graphical forms. In conclusion the authors note that the addition of easily ionized

Card 2/3

Thermal ionization and ...

S/207/62/000/002/004/015  
D237/D302

substances appears to be an effective way of lowering the temperature at which the sparingly ionizable material reaches a certain degree of electrical conductivity. Further research is considered important in connection with magnetohydrodynamic conversion of heat into electricity. There are 12 figures and 36 references: 10 Soviet-bloc and 26 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: L. W. Knewstubb and T. M. Sugden, Proc. Roy. Soc., 1960, ser. A., v. 255, no. 1283; F. M. Page, Trans. Far. Soc., 1961, v. 57, 3, no. 459; W. Chinitz, C. L. Eisen, R. A. Gross, ARS Journal, 1959, v. 29, no. 8; R. J. Rosa, Phys. Fluids, 1961, v. 4, no. 2.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

SUBMITTED: November 30, 1961

Card 3/3

✓

SHEVELEV, V.S. [Shavialou, V.S.]

Agronomic characteristics of soils in Grodno Province. Vestsi AN BSSR  
Ser.bial.nav. no.4:112-122 '58. (MIRA 12:4)  
(Grodno Province--Soils)

SHEVELEV, V.S. [Shuvialion, V.S.]

Soil parent materials in Grodno Province. Vestsi AN BSSR. Ser.  
biial.nav. no.2:40-55 '59. (MIRA 12:9)  
(GRODNO PROVINCE--SOIL FORMATION)

AUTHOR: SHEVELEV, V.V., OBOZOV, I.P. 32-6-27/54  
 TITLE: On the Relative Elongation and Relative Contraction of Samples with Rectangular Section. (Ob otnositel'nom udlinenii i otnositel'nom suzhenii obraztsov pryamougol'nogo secheniya, Russian)  
 PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 725 - 726 (U.S.S.R.)  
 ABSTRACT: The plastic properties of metals are judged by relative elongations  $\delta_k$  and relative contractions  $\psi_k$  of rectangular samples with different conditions of width  $b$  and strength  $a$ . A sample with rectangular section is known to have lower values  $\delta_k$  and  $\psi_k$  than such with a round section. These values are, furthermore, lower if the ratio  $\frac{b}{a}$  is increased. On this basis the samples with rectangular section and different  $\frac{b}{a}$  ratios are subjected to tensile tests, and the results obtained are used for the evaluation of plastic properties.  
 The following results are obtained by calculation of the ratio  $\frac{b}{a}$  and the five-fold and ten-fold elongation of the samples with rectangular section:  $\delta_5 = \frac{1}{0,025 \frac{b}{a} + 1,295}$ ,  $\delta_{10} = \frac{1}{0,050 \frac{b}{a} + 1,390}$ .

Card 1/2



32-6-27/54  
On the Relative Elongation and Relative Contraction of  
Samples with Rectangular Section.

By comparison it is proved that the experimental values obtained  
do not deviate by more than 4% from calculated values.  
(2 tables)

ASSOCIATION: Institute for Mechanics, Tula.  
PRESENTED BY:  
SUBMITTED:  
AVAILABLE: Library of Congress

Card 2/2

Shevelev V.V.

AUTHORS:

Obozov, I.P., Shevelev, V.V.

32-1-33/55

TITLE:

Significance of the Relative Dimensions of a Flat Sample Cross Section for the Determination of Low Carbon Steel Plastic Properties  
(O znachenii otnositel'nykh razmerov poperechnogo secheniya ploskogo obraztsa v otsenke plasticheskikh svoystv malouglerodistoy stali).

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 84-85 (USSR)

ABSTRACT:

In samples of plastic metals the relative elongation  $\delta'$  or shrinkage  $\psi_k$ , conditions being equal, depends on the shape and the mass ratio in the cross section. For the purpose of determining this ratio the samples of steel having a low content of carbon (0.08-0.13% C) with the cross section  $\frac{b}{a}$  (width and thickness) =  $\frac{8}{1}$  were subjected to a test. For the calculation of  $\psi_k$  it was assumed that at its point of fracture the sample consisted of 2 trapezoids, which were placed against each other with their smaller straight surfaces, and that the sum of these surfaces was equal to the surface in the cross section of the sample. The fractured surface  $F_k$  therefore was:

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Significance of the Relative Dimensions of a Flat  
Sample Cross Section for the Determination of Low Carbon  
Steel Plastic Properties

32-1-33/55

$$F_k = b_1 \frac{a' + a'' + 2a_1}{4}$$
, where  $b_1$  denotes the width of the point of fracture in the sample;  $a'$ ,  $a''$  and  $a_1$  - the thickness of the point of fracture: on the first and second edge and in the center. In the course of dealing with experimental results it was found that there is a linear ratio between  $\psi_k$  and  $\frac{b}{a}$ , which is determined by the amount of the angle between two regression straight lines. As is further shown, no connection of perpetual validity could be found between  $\sigma$  and  $\frac{b}{a}$  because conditions of elongation differ completely as e.g. in steel, copper, and brass. There are 2 figures.

ASSOCIATION: Tula Mechanical Institute (Tul'skiy mekhanicheskiy institut).

AVAILABLE: Library of Congress

Card 2/2      1. Metallurgy    2. Steels-Physical properties-Determination  
                 3. Steel-Plasticity

SHEVELEV, Viktor Vasil'yevich; SHEKHTER, V.Ya., kand. tekhn.nauk,  
retsenzent; BUMSHTEYN, S.I., inzh., red.; AGEYCHEVA, N.S.,  
red.izd-va; VLADIMIROVA, M.S., tekhn.red.

[Fundamentals of the design of universal dies] Konstruktsii  
i osnovy proektirovaniia universal'nykh shtampov. Moskva,  
Mashinostroenie, 1964. 327 p. (MIRA 17:2)

L 02395-67 EMP(c)/EMP(k)/EMP(l)/EMP(m)/EMP(n)/T/EMP(1)/EMP(2)/EMP(v)/EMP(t)/

ACC NR: AR6023326

EIT EMP(c) RH/JD

SOURCE CODE: UR/0276/66/000/003/2003/B004

AUTHOR: Shevelev, A. S.; Fadeyev, V. Ya.

TITLE: Summation of production line errors in planning automated technological processes

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 3B26

REF SOURCE: Tr. Kuybyshevsk. aviats. in-ta, vyp. 20, ch. 1, 1965, 25-35

TOPIC TAGS: error measurement, machine industry, industrial automation, probabilistic automation

ABSTRACT: A method is proposed for separate summation of random and systematic errors for technological machining processes. Summation of random errors is done according to the rules of probability theory and systematic errors are added arithmetically. Calculations and formulas are given for summation of operational errors which may be used for determining the accuracy in the relative location of any two planes machined on different operations, and to analyze allowances in machining flat surfaces. See also RZh "Tekhnologiya i oborudovaniye mekhanoboroznogo proizvodstva", 1964, 12B41. 4 illustrations, bibliography of 6 titles. L. Tsukerman. [Translation of abstract]

SUB CODE: 13

Card 1/1

UDC: 621.7.04:53.088.2

L 04044-67 E-T(1)/E-T(m)/E-WP(k)/E-WP(t)/ETI IJP(c) JD

ACC NR: AR6022140

SOURCE CODE: UR/0276/66/000/002/B004/B004

AUTHOR: Shevelev, A. S. ; Fadeyev, V. Ya.

TITLE: Summation of systematic and random errors in the determination of precision machining according to linear dimensions

SOURCE: Ref. zh. Tekhn mashinostr, Abs. 2B29

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 1, 1965, 63-70

TOPIC TAGS: machining, machining error, error, error determination

ABSTRACT: The error of machining by linear dimensions in the general form is:  
 $\Delta = a + \Delta_{mh}$ , where  $a$  is the value of the variable systematic errors within the limits of the batch of parts, and  $\Delta_{mh}$  is the field of instantaneous dispersal of machining errors. The problem considered is that of the theoretical probability of error summation due to changes in the magnitude of the systematic error in time according to a linear law. It is pointed out that for each part in the batch the numerical value of random and systematic error appears to be of random magnitude. Tables and charts are cited for error determination in machining by linear dimensions, with allowance for production risk, and for determining the percentage of rejects in a

Card 1/2

UDC: 621.9.001.5

L 04044-67

ACC NR: AR6022140

batch (of parts) in the nonsymmetric arrangement of the dispersion field of dimensions in relation to the field of tolerance. Four figures, 2 tables, and a bibliography of 4 reference items are given. L. Tikhonova. [Translation of abstract].

SUB CODE: 13/

kh

Card 2/2

SHCHELEV, Y.

Good

SSR

✓ Several relations for the diffusion of gases in a solid.  
A. M. Rozen and Ya. Schelev, *Doklady Akad. Nauk S.S.S.R.* 87, 817-819 (1962). Three cases of diffusion in solids are considered: (a) diffusion in the depth of a solid, (b) reverse diffusion (desorption) out of a solid which is partially satd. due to case a, (c) the effect of relaxation, i.e. keeping the solid at the exptl. temp., upon the rate of diffusion. The existing solns. for case a are simplified and lead to a simplified equation. The remaining 2 cases are discussed in general terms but no definite soln. is given. The data for O (cf. Shumovskaya, *et al.*, *C.A.* 47, 7830; Karpacheva and Rozen, *C.A.* 45, 8228) are interpreted on the basis of the equations that are developed. I. E. L.



Shevelev, Ya. V.

PA 240T10

USSR/Chemistry - Adsorption

. Dec 52 .

"Some Rules of the Sorption of Gases by Polydisperse Catalysts When There Is Combination of Adsorption and Solution," A. M. Rozen and Ya. V. Shevelev

"DAN SSSR" Vol 87, No 6, pp 1017-1020

The authors show in a mathematical way that similar results can be obtained by assuming either a polydisperse state of the catalysts or a combination of adsorption and soln. Presented by Acad A. N. Frumkin 20 Oct 52.

240T10

Applied Mechanics Reviews  
Vol. 7 No. 4  
Apr. 1954  
Hydraulics, Cavitation,  
Transport

1155. Shevelev, Ya. V., Poiseuille's flow in non-symmetrical radial clearance; analogy with the torsion of beams (in Russian), Doklady Akad. Nauk. SSSR (N.S.) 91, 1, 35-38, 1953.  
Kuznetsov (1952) obtained the erroneous result that the laminar resistance of cylindric tubes can be diminished by inserting an eccentric inner tube. Author therefore investigates the exact solution of the laminar flow though the annular space of two eccentric tubes. The problem follows the same differential equation as the torsion of a beam with the same annular cross section. The known solution of the latter problem by Macdonald (1894) is applied, using bipolar coordinates. Also the cases of the inner or outer tube moving in axial direction are considered. A graph shows the dependence of the flow quantity and also of the torsional stiffness from the ratio of radii and eccentricity.

W. Wuest, Germany

EH

5/26/54

SHEVELEV, Ya. V.

3

✓ Sorption of gases by polydisperse occluders. A. M. Rozen and Ya. V. Shevelev. *Zhur. Fiz. Khim.* 29, 1383-1384 (1955); *cf. U.S.A. 29, 13413e*.—The diffusion of a gas toward the grains of a polydisperse powder is calcd. For a definite type of polydispersity, the adsorbed amt.  $d = r^m$  ( $t$  = time;  $m$  = a const.), in accord with the rate of adsorption on allegedly nonuniform surfaces. Surface processes and vol. processes (such as soln.) affect the over-all rate of occlusion. J. J. Bikerman

① MA  
MST

SHEVELEV, YA. V.

Shevelev, YA. V. "The adsorption of krypton from a helium current." Min Higher Education. Moscow Engineering-Physics Inst. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

Ya.  
NEVSTRUYEVA, Ye.I., [translator]; ~~SHEVELEVA~~ I.A.V., [translator];  
STYRIKOVICH, M.A., redaktor; SHESTOPEROVA, N.V., redaktor;  
KLIMENKO, S.V., tekhnicheskij redaktor.

[Four lectures on nuclear energy] Chetyre lektsii po iadernoi  
energetike. [Translated from the English] Perevod s angliiskogo  
E.I.Nevstruevoi i I.A.V.Sheveleva. Pod red. M.A.Styrikovicha.  
Moskva, Izd-vo inost.lit-ry, 1957. 228 p. (MIRA 10:11)

1. Institution of Mechanical Engineers, London. 2. Chlen-korrespondent  
Akademii nauk SSSR (for Styrikovich).

(Atomic energy)

Shevelev, Ya V

PA - 2302

AUTHOR: SHEVELEV, Ya.V.

TITLE: The Thermal Utilization in a Narrow Lattice. (Koeffitsient ispol'zovani teplovykh neytronov b tesnoy reshetke, Russian).

PERIODICAL: Atomnaya Energiya, 1957, Vol 2, Nr 3, pp 217 - 223 (U.S.S.R.).  
Received: 4 / 1957

ABSTRACT: This coefficient of the utilization of thermal neutrons in a heterogeneous nuclear reactor is defined in the following manner:  
 $\phi = (\text{number of thermal neutrons absorbed in the blocks of a cell} / \text{number of thermal neutrons absorbed in the entire cell})$ . The present paper computes  $\phi$  for a narrow lattice. It is assumed that the field of neutrons is described by diffusion equation. However, the form of solution given here permits the introduction for corrections for the deviations from the diffusion approximation in the block and near the block. For lattices with a high degree of symmetry (e.g. in the case of a triangular lattice) corrections of the formula obtained by the method of "threadshaped blocks" (or by that of the Wigner-Seitz cell) are very small. This applies even if the volume of the blocks exceeds the volume of the moderator.

The field of thermal neutrons in the moderator and  $\phi$ : The density of the slowing down of the neutrons is assumed to be constant and numerically equal to the capture cross section of the volume unit of the moderator. It is then possible to describe the flux of

Card 1/2

PA - 2302

Shevelev, Y A V

AUTHOR: SHEVELEV,, YA,V.

PA - 2303

TITLE: The Diffusion of Neutrons in a Plane Uranium Water Lattice.  
(Diffusiya neytronov v ploskoy uranvodnoy reshetke, Russian)

PERIODICAL: Atomnaya Energiya, 1957, Vol 2, Nr.3, pp 224 - 230 (U.S.S.R.)

Received: 4 / 1957

Reviewed: 5 / 1957

ABSTRACT: The computation of the diffusion of neutrons in a lattice with cylindrical blocks is complicated. The present paper deals with a simpler problem: Neutron diffusion in a plane lattice is parallel and vertical to the layers. Anisotropy must, by the way, be smaller in a cylindrical lattice than in a plane lattice. First the problem is solved in diffusion approximation in consideration of absorption. Then the problem of longitudinal diffusion is rigorously solved, but without absorption. The result is an interpolation formula in consideration of both absorption and deviation from the diffusion theory.

Transversal diffusion with absorption: A drawing illustrates a lattice with alternating layers of two substances with different capture cross-sections and different transport lengths. The plane neutron source is in  $-\infty$  and diffusion is vertical to the layers. The thickness of the layers is great, but their capture cross-sections are small. For this case the diffusion equation and its solution are given. The homogeneous equation system resulting herefrom can only be solved in case of a certain value of the required length of

Card 1/2

*SHEVELEV, Ya. V.*  
ROZEN, A.M.; KARPACHEVA, S.M.; SHEVELEV, Ya. V.

Mobility of oxygen in oxides, and kinetics of oxygen exchange.  
Probl. kin. i kat. 9:251-263 '57. (MIRA 11:3)  
(Oxides) (Oxygen--Isotopes) (Catalysts)



Shenalev, Ya. V.

/ The diffusion of adsorption fronts. I. Quantitative characteristics of the diffusion. Ya. V. Shevelev, Zhur. Fiz. Khim. 31, 960-74(1957)—A general solution is given for the problem of dynamic sorption (for a linear isotherm). On the basis of this solution limits were established for the applicability of the phenomenological conceptions of "delay," "theoretical plates," and "effective diffusion." Within these limits the form of the adsorption wave does not depend on the mechanism of its diffusion. The process is characterized by 2 consts.:  $u$ —the rate of transfer, which is related to the equil. const.  $\Gamma$  for adsorption, and  $\tau$ , the dynamic const.  
I. Rovtar Leach

2  
4E4g

11

SHEVEL'EV, Ya.V. (Moskva).

Diffuseness of the adsorption wave. Part 2: Wall and granulation  
effects (with summary in English). Zhur. fiz. khim. 31 no.6:1210-  
1215 Je '57. (MIRA 10:12)

(Adsorption)

SHEVELEV, Ya. V.; FEYNBERG, S. M.; ANTSIFEROV, Ye. S.; KATKOV, V. P. ;  
KOMISSAROV, L. V.; LEVINA, I. K.; NIKOL'SKIY, Yu. V.; NOVIKOV, A. N.;  
OSMACHKIN, V. S.; STOLIYAROV, G. A.

"Fuel Burn Up in Water-water Power Reactors and Experiments with the Uranium Water Lattice."

report presented at the 2nd Intl. Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958.

published in Doklady sovet'skikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power Moscow, Atomizdat, 1959. 707pp. Vol. 2

45139

S/089/63/014/002/009/019  
B102/B186

21,1000

AUTHORS: Shevelev, Ya. V., Saul'yev, V. K.

TITLE: Some aspects of the application of a two-dimensional two-group diffusion program

PERIODICAL: Atomnaya energiya, v. 14, no. 2, 1963, 200 - 205

TEXT: A program for the numerical solution of the reactor equations

$$-\operatorname{div}(D_1 \operatorname{grad} \Phi_1) + \Sigma_1 \Phi_1 = \frac{1}{k_0} \Sigma_{2 \rightarrow 1} \Phi_2; \quad (1)$$

$$-\operatorname{div}(D_2 \operatorname{grad} \Phi_2) + \Sigma_2 \Phi_2 = \Sigma_{1 \rightarrow 2} \Phi_1; \quad (2)$$

$$-\operatorname{div}(D \operatorname{grad} \Phi) + \Sigma \Phi = F \quad (3)$$

in two-group diffusion approximation and in plane geometry was established at the Ordena Lenina Institut atomnoy energii AN SSSR (Lenin Order Institute of Atomic Energy AS USSR) in the years 1957 - 1958. The present purpose was to find out how far this program can be extended to a larger area of the reactor problems under the same simple assumptions as to the integration

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Some aspects of the application...

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domain and properties of symmetry and continuity. The solution of Eq. (1) - (3) depends on an application of the net method and on using an iteration procedure for solving the system of net equations. For this purpose the rectangular integration domain  $R$  is covered in such a manner with the net lines that the latter coincide with the lines of discontinuity of the coefficients  $D_i$ ,  $\Sigma_i$ ,  $\Sigma_{2+1}$ , and  $\Sigma_{1+2}$ . For carrying out this program it is necessary that  $R$  be regularly expressible as the sum of elementary rectangles. This is made possible by a linear continuation of the discontinuity lines of the coefficients up to the surface of  $R$ . One has thus the system of net equations for all nodes inside of  $R$  plus the boundary conditions on the surface of  $R$  which together form a system of linear algebraic equations that can be solved by iteration. The relaxation factors of the consecutive upper relaxations are automatically selected as optimal. This happens in block 2 of the three-block program. Block 1 is the principal block; blocks 2 and 3 are auxiliary blocks which work only in the first stage of computation; 3 serves to formulate the commands. In practice there are a number of cases for which the program is suitable in first approximation, but also elements which are contradictory to it. Some examples of such cases are given and it is shown how the program can be

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Some aspects of the application...

S/089/63/014/002/009/019  
B102/B186

adapted to the distorted factors. Some of these devices are applicable to other programs also. These cases include the appearance of non-diffusion effects, distortions of two-dimensionality and errors arising from the limitation to two groups only. It is finally shown that the program can be applied also to some special cases for calculations of temperature distribution.

SUBMITTED: March 17, 1962

Card 3/3

SHEVELEV, YA. V.

AID Nr. 977-5 27 May

EFFECT OF CHANNELS AND SLITS ON REACTIVITY (USSR)

Shevelev, Ya. V. Atomnaya energiya, v. 14, no. 4, Apr 1963, 364-370.  
S/089/63/014/004/004/019

The effect of cylindrical and plane inclusions in a reactor core has been investigated analytically by means of a perturbation theory. The following conditions were assumed: 1) the transport cross section of an inclusion ( $\Sigma'_{tr}$ ) differs from the transport cross section of a surrounding medium ( $\Sigma_{tr}$ ) by an arbitrary value, 2) the change in reactivity  $\rho$  with a change in  $\Sigma_{tr}$  is small as compared to  $k_{\infty} - 1$ , and 3) the transverse dimensions of the zone with variable  $\Sigma_{tr}$  are small with respect to the vertical dimensions. On the basis of the neutron flux distribution in a laminated medium and near a cylinder, an expression is derived for the relationship between the change in reactivity and the characteristics of an inclusion, e. g., its transport cross section,

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AID Nr. 977-5 27 May

EFFECT OF CHANNELS [Cont'd]

S/089/63/014/004/004/019

volume, shape, and location. It was found that a row of cylinders arranged along the y-axis produce the same neutron flux jumps as a plane layer made of the same material, if the product of the volume of the cylinders and the function of the ratio of channel radius to transport length is equal to the volume of the layer. Also, the mean coefficient of diffusion for a series of layers has the same value as that for an equivalent row of cylinders. [AS]

Card 2/2



FEYNBERG, S. M.; SHEVELEV, Ya. V.

"The pulse reactor potentialities, (for neutrino investigations 1)."

report presented at the 3rd Intl Conf on Peaceful Uses of Atomic Energy, Geneva,  
31 Aug- Sep 64.

SHEVELEV, Ya. V.; ZHIRNOV, A. D.; TALYZIN, V. M.

"Potentialities of pulsed reactors."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,  
31 Aug-9 Sep 64.



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ACCESSION NF 45001000

power installations.

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SUB CODE: NP

SUBMITTED: 07Oct64 NR REF SOV: 130

OTHER: 158

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14c  
L 24218-65 ENT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Pa-4/Pu-4 DM

ACCESSION NR: AP5001268

S/0089/64/017/006/0463/0474 'B

(deceased)  
AUTHOR: Kurchatov, I. V.; Feynberg, S. M.; Dollezhal', N. A.; Aleshchenkov, P. I.; Drozdov, F. S.; Yemel'yanov, I. Ya.; Zhirnov, A. D.; Kazachenko, M. A.; Knyazeva, G. D.; Kondrat'yev, F. V.; Lavrenikov, V. D.; Morgunov, N. G.; Petunin, B. V.; Smirnov, V. P.; Talyzin, V. M.; Filippov, A. G.; Chikhladze, I. L.; Chulkov, P. M.; Shevelev, Ya. V.

TITLE: Pulse graphite reactor<sup>19</sup> IGR

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 463-474

TOPIC TAGS: pulse graphite reactor, high neutron flux pulse, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR #322a report at the International Conference on Peaceful Uses of Atomic Energy in Geneva, 1964. It represents an elaboration of the description of the pulse graphite reactor IGR given by S. M. Feinberg at the Second International Conference. The pulse reactors are used when a high neutron flux is desirable. The described reactor was in opera-

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L 24218-65

ACCESSION NR: AP5001268

tion for several years, and is still working without failure. Orig. art. has: 6 figures

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP'

NR REF SOV: 002

OTHER: 001

Card 2/2



SHEVCHEN, Yu. I., inzh. (Leningrad)

Popular structures for supporting a given water level in a canal.  
Gidr. i mel. 17 no. 5:38-40 My '65. (MIRA 18:7)

123-1-1522

Translation from: Referativnyy Zhurnal, Mashinostroyeniye 1957,  
Nr 1, p. 220 (USSR)

AUTHOR: Shevelev, Ye.I.

TITLE: Automatic Temperature Adjustment in Flame Thermal  
Furnaces (Experience of the Ural Railroad Car Building  
Plant) (Avtomatizatsiya regulirovaniya temperatury  
plamennykh termicheskikh pechey. (Opyt Ural'skogo  
vagonostroitel'n. zavoda))

PERIODICAL: Obmen tekhn. opytom. Vses.proyektno-tekhrol. in-t,  
1956, Nr 10, p.20

ABSTRACT: Bibliographic entry.

Card 1/1

S/117/60/000/008/007/020  
A002/A001

AUTHOR: Shevelev, Ye.M.

TITLE: Forging Dies With Inserts Fixed by Balls

PERIODICAL: Mashinostroitel', 1960, No. 8, pp. 15-16

TEXT: Efficiency experts V.F. Osipenko, P.P. Shcheponikov and V.A. Kuchumov suggested fixing of forging die inserts in casings with the aid of standard balls. Circular, corresponding grooves are cut into the casing and the insert made of 5XHB (5KhNV) or 5XHM (5KhNM) steel. After installing the insert into the casing, the circular groove is filled with balls through an aperture in the casing. The aperture is then closed by a bolt. This method eliminates the time-consuming heating of die casings for installing or removing the inserts. The quality of the forging improves, too. Standard balls of 20.638 mm diameter are used for larger dies, while balls of 5.081 mm diameter are used for smaller dies; according to ГОСТ 3722-54 (GOST 3722-54). The efficiency of this method was proved during 18 months of practical application. There are 3 figures. ✓

Card 1/1

MAZUROVA, T.M.; POPOVA, T.I.; SHMUSHKOVICH, A.Ya.; SHEVELEVA, A.A.;  
GUNER, I.I.; LAVRENOVA, V.A.

Letter to the editors. Stomatologiya 38 no.3:72 My-Je '59.  
(MIRA 12:8)  
(PLASTICS)